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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/476,358	01/03/2000	PAUL SMITH	PM-265540	7714

909            7590            08/20/2003  
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EXAMINER	
PARKER, KENNETH	
ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 08/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.  
a/m

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/476,358	Examiner Kenneth A Parker	Art Unit 2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 5/23/03.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 33-55 and 57-64 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 33-47,50-55 and 57-64 is/are rejected.
- 7) Claim(s) 48 and 49 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) <input type="checkbox"/> Other: _____ .

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(f) he did not himself invent the subject matter sought to be patented.

**Claims 33 -35, 37- 46, 50, 53, 57, 59-64 rejected under 35 U.S.C. 102(f)**

**because the applicant did not invent the claimed subject matter.**

The reference Weder “Incorporation of photoluminescent polarizers into liquid crystal displays” has a different inventorship in that Andrea Montali is also listed.

**Claims 33 -35, 37- 46, 50, 53, 57, 59-64 are rejected under 35 U.S.C. 102(a)  
as being clearly anticipated by Weder “Incorporation of photoluminescent  
polarizers into liquid crystal displays”.**

The Weder reference shows a material which is dichroic in its absorption and emission (see page 1, end of column 1- page 2). A layer thickness of 2um thickness is disclosed (3<sup>rd</sup> column, near top). The polymer is a conjugated polymer ( 3<sup>rd</sup> column, middle, see the chemical structure, the benzene ring with alternating double bonds). A absorption dichroic ration of 15 and emissive of 22 is disclosed (column 3). Use in LCD

stacked structures as claimed (fig 2, top and bottom embodiments are the two claimed structures). Improvement of brightness and viewing angle is disclosed ( page 3, column 1, top of page). The spectrums is in that of the light source (in description of fig 2). Therefore, these claims are anticipated by Weder.

***Claim Rejections - 35 USC § 103***

**Claims 33-35, 37- 46, 50, 53, 57, 59-64, 36, 47, 51-52, 55, 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over as being clearly anticipated by Clausen et al 5122557.**

Clausen discloses materials as claimed and indicates liquid crystal devices as an application for their polarizer, but does not indicate the dichroic ratios. As the dichroic ratios were well known as the primary thing to optimize for polarizers, one of ordinary skill would have known to maximize the dichroic ratio as is was the definition of functioning of a polarizer.

The claimed locations in respect were conventionally done, as they were conventionally placed on both sides of the liquid crystal cell. See the applicant's admitted prior art, pages 1-3. Still lacking is the high brightness, contrast or viewing angle. These were the well known properties that were optimized, and would have been obvious to one of ordinary skill for those reasons.

Regarding claim 36, using an electrically switchable light valve was conventional, as substantially all LCD displays used were electronically, which therefore would have

been obvious to one of ordinary skill for the benefits associated with using conventional equipment.

Regarding claim 47, the reference discusses dichroic ratio as something to maximize (is the focus of the article) for the viewing property benefits. Therefore having a higher dichroic ratio would have been obvious to one of ordinary skill.

Regarding claims 51-52, the use of multiple displays was well known for enabling the viewing of more information (two displays were well known to be better than one), and would therefore have been obvious to one of ordinary skill for that reason.

55 – The product by process includes “obtainable by” or equivalent language, thereby clearly not defining over the prior art. Please keep in mind that a product by process limitation imparts patentability only in so far as it defines a materially different invention, and this does not and therefore does not impart patentability to the claim.

Regarding claim 58 brightness and viewing angle were- goals of the liquid crystal art, and mentioned in the reference, and therefore obvious to one of ordinary skill to make as large as possible.

**Claims 36, 47, 51-52, 55, 58, are rejected under 35 U.S.C. 103(a) as being unpatentable over Weder “Incorporation of photoluminescent polarizers into liquid crystal displays”.**

Regarding claim 36, using an electrically switchable light valve was conventional, as substantially all LCD displays used were electronically, which therefore would have

been obvious to one of ordinary skill for the benefits associated with using conventional equipment.

Regarding claim 47, the reference discusses dichroic ratio as something to maximize (is the focus of the article) for the viewing property benefits. Therefore having a higher dichroic ratio would have been obvious to one of ordinary skill.

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Regarding claim 58 brightness and viewing angle were- goals of the liquid crystal art, and mentioned in the reference, and therefore obvious to one of ordinary skill to make as large as possible.

**Claims 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weder “Incorporation of photoluminescent polarizers into liquid crystal displays” in view of Vriens 4822144.**

Lacking from the disclosure is the dichroic mirror. Vriens, in a device that uses photoluminescent to enhance a display, teaches in using a UV dichroic mirror for

brightening the display, which would have been obvious to one of ordinary skill for that reason.

**Claims 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clausen et al 5122557 in view of Vriens.**

Lacking from the disclosure is the dichroic mirror. Vriens, in a device that uses photoluminescent to enhance a display, teaches in using a UV dichroic mirror for brightening the display, which would have been obvious to one of ordinary skill for that reason.

***Allowable Subject Matter***

**The rejections applied can be overcome with an appropriate affidavit submitting indicating that applicant is the inventor of the claimed subject matter (applicant's own work) if appropriate, and by amending appropriately to clarify what the function of the layer is in respect to the claimed device. Applicant may contact the examiner to discuss potential amendments to this end.**

**Claims 48-49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

***Response to Arguments***

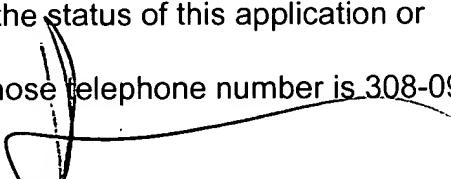
Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth A Parker whose telephone number is 703-305-6202. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.

  
Kenneth A Parker  
Primary Examiner  
Art Unit 2871

August 6, 2003